

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

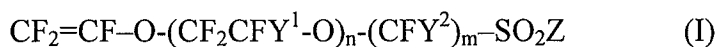
1. (currently amended): ~~A~~An electrolyte membrane comprising a fluoropolymer containing acid/acid salt groups and having  $-\text{CF}_2\text{H}$  groups at polymer chain terminals, wherein said acid/acid salt groups are sulfonic acid groups,  $-\text{SO}_2\text{NR}^1\text{R}^2$ ,  $-\text{SO}_3\text{NR}^3\text{R}^4\text{R}^5\text{R}^6$ ,  $-\text{SO}_3\text{M}^1_{1/L}$ , phosphoric acid groups,  $-\text{PO}_3(\text{NR}^7\text{R}^8\text{R}^9\text{R}^{10})_2$  and/or  $-\text{PO}_3\text{M}^2_{2/L}$ , in the formula  $\text{R}^1$  represents H or  $\text{M}^6_{1/L}$ ,  $\text{R}^2$  represents H,  $\text{M}^7_{1/L}$ , an alkyl group or a sulfonyl-containing group,  $\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$ ,  $\text{R}^7$ ,  $\text{R}^8$ ,  $\text{R}^9$  and  $\text{R}^{10}$  are the same or different and each represents H or an alkyl group containing 1 to 4 carbon atoms,  $\text{M}^1$ ,  $\text{M}^2$ ,  $\text{M}^6$  and  $\text{M}^7$  are the same or different and each represents a metal having a valence of L, said metal having a valence of L being a metal belonging to the group 1, 2, 4, 8, 11, 12 or 13 of the long-form periodic table.
2. (currently amended): The electrolyte membrane ~~fluoropolymer~~ according to Claim 1, said fluoropolymer being one obtained by subjecting a fluoropolymer precursor containing acid/acid salt groups and having  $-\text{CF}_2\text{COOX}$  groups at polymer chain terminals, in the formula X represents H,  $\text{NR}^{11}\text{R}^{12}\text{R}^{13}\text{R}^{14}$  or  $\text{M}^4_{1/L}$ ;  $\text{R}^{11}$ ,  $\text{R}^{12}$ ,  $\text{R}^{13}$  and  $\text{R}^{14}$  are the same or different and each represents H or an alkyl group containing 1 to 4 carbon atoms and  $\text{M}^4$  represents a metal having a valence of L, said metal having a valence of L being as defined above, to heat treatment by which said  $-\text{CF}_2\text{COOX}$  groups can be converted to  $-\text{CF}_2\text{H}$  groups, X being as defined above.

3. (currently amended): The ~~fluoropolymer electrolyte membrane~~ according to Claim 1,

wherein said acid/acid salt groups are sulfonic acid groups,  $-\text{SO}_3\text{NR}^3\text{R}^4\text{R}^5\text{R}^6$  and/or  $-\text{SO}_3\text{M}^1_{1/L}$ ,  $\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$  and  $\text{M}^1$  being as defined above.

4. (currently amended): ~~The~~ A method of producing the ~~fluoropolymer electrolyte membrane~~ according to Claim 1, by subjecting a fluoropolymer precursor containing acid/acid salt groups and having  $-\text{CF}_2\text{COOX}$  groups at polymer chain terminals, in the formula X represents  $\text{H}$ ,  $\text{NR}^{11}\text{R}^{12}\text{R}^{13}\text{R}^{14}$  or  $\text{M}^4_{1/L}$ ;  $\text{R}^{11}$ ,  $\text{R}^{12}$ ,  $\text{R}^{13}$  and  $\text{R}^{14}$  are the same or different and each represents  $\text{H}$  or an alkyl group containing 1 to 4 carbon atoms and  $\text{M}^4$  represents a metal having a valence of  $L$ , said metal having a valence of  $L$  being a metal belonging to the group 1, 2, 4, 8, 11, 12 or 13 of the long-form periodic table, to heat treatment for the conversion of said  $-\text{CF}_2\text{COOX}$  groups to  $-\text{CF}_2\text{H}$  groups,  $X$  being as defined above,

wherein said fluoropolymer precursor is one obtained by polymerizing a perhalovinyl ether derivative represented by the general formula (I):



wherein  $\text{Y}^1$  represents  $\text{F}$ ,  $\text{Cl}$  or a perfluoroalkyl group,  $n$  represents an integer of 0 to 3, the  $n$  atoms/groups of  $\text{Y}^1$  are the same or different,  $\text{Y}^2$  represents  $\text{F}$  or  $\text{Cl}$ ,  $m$  represents an integer of 1 to 5, the  $m$  atoms of  $\text{Y}^2$  are the same or different and  $\text{Z}$  represents  $\text{F}$ ,  $\text{Cl}$ ,  $\text{Br}$ ,  $\text{I}$ ,  $-\text{OM}^5_{1/L}$  or  $-\text{ONR}^{15}\text{R}^{16}\text{R}^{17}\text{R}^{18}$ ;  $\text{M}^5$  represents a metal having a valence of  $L$  and the metal having a valence of  $L$  is as defined above, and  $\text{R}^{15}$ ,  $\text{R}^{16}$ ,  $\text{R}^{17}$  and  $\text{R}^{18}$  are the same or different and each represents  $\text{H}$  or an alkyl group containing 1 to 4 carbon atoms,

said fluoropolymer precursor constitutes a membrane-shaped molding,

when the group  $-\text{SO}_2\text{Z}$  in the general formula (I) is not said acid/acid salt group but is a group convertible to such acid/acid salt group, said fluoropolymer precursor is one subjected to a conversion treatment, after the above-mentioned polymerization, for the conversion of said group  $-\text{SO}_2\text{Z}$  to the above-mentioned acid/acid salt group, and

said heat treatment comprises heating said fluoropolymer precursor at 120 to 400°C.

5. (currently amended): The method of producing a ~~fluoropolymer~~ an electrolyte membrane according to Claim 4,

wherein the heat treatment comprises heating the fluoropolymer precursor at 120 to 200°C in the presence of water or an organic solvent having compatibility with water.

6. (currently amended): The method of producing a ~~fluoropolymer~~ an electrolyte membrane according to Claim 5,

wherein the organic solvent having compatibility with water is an organic liquid having a boiling point exceeding 100°C but not exceeding 300°C.

7. (currently amended): The method of producing a ~~fluoropolymer~~ an electrolyte membrane according to Claim 4,

wherein the fluoropolymer precursor is an at least binary copolymer obtained by polymerizing the perhalovinyl ether derivative and a monomer copolymerizable with said perhalovinyl ether derivative.

8. (currently amended): The method of producing a ~~fluoropolymer~~ an electrolyte membrane according to Claim 4,

wherein  $\text{Y}^2$  is F, n is 0 or 1 and m is 2 or 3.

9-16. (canceled).

17. (currently amended): A solid polymer electrolyte fuel cell comprising the electrolyte membrane according to ~~Claim 11~~ Claim 1.

18. (new): An immobilized active substance material comprising a fluoropolymer and an active substance,

said fluorocopolymer containing acid/acid salt groups and having -CF<sub>2</sub>H groups at polymer chain terminals,

wherein said acid/acid salt groups are sulfonic acid groups, -SO<sub>2</sub>NR<sup>2</sup>R<sup>2</sup>, -SO<sub>3</sub>NR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>R<sup>6</sup>, -SO<sub>3</sub>M<sup>1</sup><sub>1/L</sub>, phosphoric acid groups, -PO<sub>3</sub>(NR<sup>7</sup>R<sup>8</sup>R<sup>9</sup>R<sup>10</sup>)<sub>2</sub> and/or -PO<sub>3</sub>M<sup>2</sup><sub>2/L</sub>, in the formula R<sup>1</sup> represents H or M<sup>6</sup><sub>1/L</sub>, R<sup>2</sup> represents H, M<sup>7</sup><sub>1/L</sub>, an alkyl group or a sulfonyl-containing group, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup> and R<sup>10</sup> are the same or different and each represents H or an alkyl group containing 1 to 4 carbon atoms, M<sup>1</sup>, M<sup>2</sup>, M<sup>6</sup> and M<sup>7</sup> are the same or different and each represents a metal having a valence of L, said metal having a valence of L being a metal belonging to the group 1, 2, 4, 8, 11, 12 or 13 of the long-form periodic table.

19. (new): The immobilized active substance material according to Claim 18, said fluoropolymer being one obtained by subjecting a fluoropolymer precursor containing acid/acid salt groups and having -CF<sub>2</sub>COOX groups at polymer chain terminals, in the formula X represents H, NR<sup>11</sup>R<sup>12</sup>R<sup>13</sup>R<sup>14</sup> or M<sup>4</sup><sub>1/L</sub>; R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>14</sup> are the same or different and each represents H or an alkyl group containing 1 to 4 carbon atoms and M<sup>4</sup> represents a metal having a valence of L, said metal having a valence of L being as defined above, to heat treatment by which said -CF<sub>2</sub>COOX groups can be converted to -CF<sub>2</sub>H groups, X being defined above.

20. (new): The immobilized active substance material according to Claim 13,  
wherein said acid/acid salt groups are sulfonic acid groups,  $-\text{SO}_3\text{NR}^3\text{R}^4\text{R}^5\text{R}^6$  and/or  $-\text{SO}_3\text{M}^1_{1/L}$ ,  $\text{R}^3$ ,  $\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$  and  $\text{M}^1$  being defined above.
21. (new): The immobilized active substance material according to Claim 18,  
wherein the active substance is a catalyst.
22. (new): The immobilized active substance material according to Claim 21,  
wherein the catalyst is a platinum-containing metal.
23. (new): A membrane-electrode assembly comprising the immobilized active  
substance material according to Claim 21.
24. (new): A solid polymer electrolyte fuel cell comprising the membrane-electrode  
assembly according to Claim 23.